

The Ohio State University

Storen + Atrazine and Acuron vs. Competitors PRE and PRE followed by POST for Crop Safety, Weed Control and Yield (ATZ Universities)

[Medium & Fine Soils]

Trial ID: USNK0H7012024
 Protocol ID: HBI001A4-2024US Location: Bruns Dain FS Trial Year: 2024
 Study Director: Scott Payne Sponsor Contact: Mark Kitt Conducted Under GEP: No
 Investigator: Dain Bruns Trial Origin: P public institution trial

Crop Description

Crop 1: C ZEAMD Zea mays indentata Dent corn BBCH Scale: BCOR
 Entry Date: Apr-24-2024 Stage Scale: BBCH
 Variety: P10477Q Maturity Group: 110
 Attributes: RR,LL tolerant
 Seed Lot No: W3CPM13029-N Seed Source: Pioneer
 % Germination: 95 1000 Seed Weight: 0.53 LB
 Seed Treatment Products: LumiGen, Lumisure 1250
 Planting Rate: 32097 S/A
 Planting Date: Apr-22-2024
 Depth: 1.5 IN Planting Method: PLANTD planted
 Rows per Plot: 4 Planting Equipment: FPP finger pickup planter
 Row Spacing: 30 IN Seed Bed: MEDIUM medium
 Soil Moisture: SLIDRY slightly dry
 Soil Temperature: 60 F
 Emergence Date: May-2-2024

Pest Description

Pest 1 Type: W Code: SETFA Setaria faberi Entry Date: May-13-2024
 Common Name: Giant foxtail Stage Scale: BBCH
 Pest 2 Type: W Code: AMBTR Ambrosia trifida Entry Date: May-13-2024
 Common Name: Giant ragweed Stage Scale: BBCH
 Pest 3 Type: W Code: CHEAL Chenopodium album Entry Date: May-13-2024
 Common Name: common lambsquarters Stage Scale: BBCH
 Pest 4 Type: W Code: AMARE Amaranthus retroflexus Entry Date: May-13-2024
 Common Name: Redroot pigweed Stage Scale: BBCH
 Pest 5 Type: W Code: ABUTH Abutilon theophrasti Entry Date: May-13-2024
 Common Name: velvetleaf Stage Scale: BBCH
 Pest 6 Type: W Code: HIBTR Hibiscus trionum Entry Date: Jun-10-2024
 Common Name: Venice mallow Stage Scale: BBCH
 Pest 7 Type: W Code: SIDSP Sida spinosa Entry Date: Jun-10-2024
 Common Name: Prickly sida Stage Scale: BBCH

Site and Design

Treated Plot Width: 10 FT
 Treated Plot Length: 30 FT
 Treated Plot Area: 300.0 FT²
 Replications: 4 Treatments: 16 Plots: 64 Study Design: RACOB L Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block
 Distance between Blocks: 0 FT
 Distance between 'Plot' Experimental Units: 0 FT

Soil Description

Description Name: E-1
 Texture: L loam
 Soil Name: Kokomo
 Fert. Level: G good

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Application Description

	A	B
Date	Apr-22-2024	May-13-2024
Start Time	6:00 PM	8:00 AM
Stop Time	6:30 PM	8:15 AM
Interval to Prev. Appl.		21 DAYS
Method	SPRAY	NONINC
Timing	PREPRE	POSPOS
Placement	BROSOL	BROFOL
Mixed/Prepared By		Dobbels
Applied By	Dobbels	Dobbels
Entry Date	Apr-24-2024	May-13-2024
Air Temperature Start, Stop	60, 60 F	58, 58 F
% Relative Humidity Start, Stop	30, 30	68, 68
Wind Velocity+Dir. Start	8 MPH, NE	5 MPH, N
Wind Velocity+Dir. Stop	8 MPH, NE	5 MPH, N
Wind Velocity+Dir. Max	10 MPH, NE	6 MPH, N
Wet Leaves (Y/N)	N, no	N, no
Soil Temperature	60 F	58 F
Soil Temperature Depth	6 IN	6 IN
Soil Moisture	SLIDRY	SLIDRY
% Ground Cover	0	70
% Cloud Cover	10	0
First Moisture Occurred On	Apr-23-2024	May-14-2024
Time to First Moisture	23.0 HR	22.0 HR
Amount of First Moisture	0.15 IN	0.1 IN
Moisture 24 Hours After Appl.	0.15 IN	0.1 IN
Moisture 1 Week After Appl.	0.65 IN	1.91 IN
Problems with Application?	N, no	N, no

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR
Stage Majority, Percent		12, 100
Height Average		5 IN
Height Minimum, Maximum		4, 6

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Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
	-BICYCLOPYRONE	6.914636			48.5								
5	RESICORE 3.29 SC	394.4	gA/L	SC	2310	g ai/ha	2.5	qt/a	A	105	211	315	408
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
6	RESICORE 3.29 SC	394.4	gA/L	SC	2770	g ai/ha	3	qt/a	A	106	212	307	404
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
7	TRIVOLT	438	gA/L	SC	560	g ai/ha	17.5	fl oz/a	A	107	201	316	413
	-FLUFENACET	305.9559			390								
	-THIENCARBAZONE-METHYL	24.69118			31.6								
	-ISOXAFLUTOLE	61.19118			78								
	-CYPROSULFAMIDE	46.16176			59								
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
8	TRIVOLT	438	gA/L	SC	640	g ai/ha	20	fl oz/a	A	108	209	312	414
	-FLUFENACET	305.9559			447								
	-THIENCARBAZONE-METHYL	24.69118			36								
	-ISOXAFLUTOLE	61.19118			89								
	-CYPROSULFAMIDE	46.16176			67.5								
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
9	MAVERICK CORN HERBICIDE	244.3	gA/L	SC	428	g ai/ha	24	fl oz/a	A	109	202	305	411
	-MESOTRIONE	98.9			173								
	-CLOPYRALID	62.7			110								
	-PYROXASULFONE	82.7			145								
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
10	MAVERICK CORN HERBICIDE	244.3	gA/L	SC	571	g ai/ha	32	fl oz/a	A	110	206	302	409
	-MESOTRIONE	98.9			231								
	-CLOPYRALID	62.7			147								
	-PYROXASULFONE	82.7			193								
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a	A				
	-ATRAZINE	480			840								
11	STOREN	386.02	gA/L	ZC	948	g ai/ha	1.05	qt/a	A	111	213	303	406
	-BICYCLOPYRONE	8.591233			21								
	-S-METOLACHLOR	309.5244			760								
	-MESOTRIONE	35.23846			86.5								
	-PYROXASULFONE	17.19207			42.2								
	-BENOXACOR	15.47382			38								
	AATREX 4L	480	gA/L	SC	420	g ai/ha	0.374	qt/a	A				
	-ATRAZINE	480			420								
	AMSOL			SL	2.5	% v/v	2.5	% v/v	B				
	STOREN	386.02	gA/L	ZC	948	g ai/ha	1.05	qt/a	B				
	-BICYCLOPYRONE	8.591233			21								
	-S-METOLACHLOR	309.5244			760								
	-MESOTRIONE	35.23846			86.5								
	-PYROXASULFONE	17.19207			42.2								
	-BENOXACOR	15.47382			38								
	AATREX 4L	480	gA/L	SC	420	g ai/ha	0.374	qt/a	B				
	-ATRAZINE	480			420								
	ROUNDUP POWERMAX 3 HERBICIDE	575	gAE/L	SL	1010	g ae/ha	24	fl oz/a	B				
	-GLYPHOSATE	575			1010								
12	STOREN	386.02	gA/L	ZC	1080	g ai/ha	1.2	qt/a	A	112	203	309	405
	-BICYCLOPYRONE	8.591233			24								
	-S-METOLACHLOR	309.5244			870								
	-MESOTRIONE	35.23846			99								
	-PYROXASULFONE	17.19207			48								
	-BENOXACOR	15.47382			43.3								
	AATREX 4L	480	gA/L	SC	420	g ai/ha	0.374	qt/a	A				
	-ATRAZINE	480			420								
	AMSOL	100	%	SL	2.5	% v/v	2.5	% v/v	B				

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	STOREN	386.02	gA/L	ZC	1080	g ai/ha	1.2	qt/a		B					
	-BICYCLOPYRONE	8.591233			24										
	-S-METOLACHLOR	309.5244			870										
	-MESOTRIONE	35.23846			99										
	-PYROXASULFONE	17.19207			48										
	-BENOXACOR	15.47382			43.3										
	AATREX 4L	480	gA/L	SC	420	g ai/ha	0.374	qt/a		B					
	-ATRAZINE	480			420										
	ROUNDUP POWERMAX 3 HERBICIDE	575	gAE/L	SL	1010	g ae/ha	24	fl oz/a		B					
	-GLYPHOSATE	575			1010										
13	STOREN	386.02	gA/L	ZC	1530	g ai/ha	1.7	qt/a		A	113	207	304	403	
	-BICYCLOPYRONE	8.591233			34										
	-S-METOLACHLOR	309.5244			1230										
	-MESOTRIONE	35.23846			140										
	-PYROXASULFONE	17.19207			68										
	-BENOXACOR	15.47382			61.3										
	AATREX 4L	480	gA/L	SC	420	g ai/ha	0.374	qt/a		A					
	-ATRAZINE	480			420										
	AMSOL	100	%	SL	2.5	% v/v	2.5	% v/v		B					
	NIS	100	%	SL	0.25	% v/v	0.25	% v/v		B					
	AATREX 4L	480	gA/L	SC	561	g ai/ha	0.5	qt/a		B					
	-ATRAZINE	480			561										
	HALEX GT 4.38 CS	525	gA/L	CS	2210	g ai/ha	3.6	pt/a		B					
	-GLYPHOSATE	250			1050										
	-S-METOLACHLOR	250			1050										
	-MESOTRIONE	25			105										
14	AMSOL	100	%	SL	2.5	% v/v	2.5	% v/v		B	114	216	310	415	
	STOREN	386.02	gA/L	ZC	1900	g ai/ha	2.1	qt/a		B					
	-BICYCLOPYRONE	8.591233			42.3										
	-S-METOLACHLOR	309.5244			1520										
	-MESOTRIONE	35.23846			173										
	-PYROXASULFONE	17.19207			85										
	-BENOXACOR	15.47382			76										
	AATREX 4L	480	gA/L	SC	840	g ai/ha	0.748	qt/a		B					
	-ATRAZINE	480			840										
	ROUNDUP POWERMAX 3 HERBICIDE	575	gAE/L	SL	1010	g ae/ha	24	fl oz/a		B					
	-GLYPHOSATE	575			1010										
	CLARITY	480	gA/L	SL	281	g ai/ha	8	fl oz/a		B					
	-DICAMBA DIGLYCOLAMINE SALT	480			281										
15	LEXAR EZ 3.7 ZC	443.8	gA/L	ZC	3630	g ai/ha	3.5	qt/a		A	115	210	311	402	
	-ATRAZINE	203.6362			1670										
	-BENOXACOR	10.35273			85										
	-S-METOLACHLOR	203.6362			1670										
	-MESOTRIONE	26.17482			214										
16	ANTHEM MAXX 4.3 SC	515.26	gA/L	SC	150	g ai/ha	4	fl oz/a		A	116	204	301	407	
	-FLUTHIACET-METHYL	15.1			4.4										
	-PYROXASULFONE	500.16			146										
	BELLUM 4 SC	480	gA/L	SC	140	g ai/ha	4	fl oz/a		A					
	-MESOTRIONE	480			140										
	AATREX 4L	480	gA/L	SC	1680	g ai/ha	1.5	qt/a		A					
	-ATRAZINE	480			1680										

Sort Order: Replicate 1